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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,773	01/23/2001	David Meiri	07072-129001 / EMC 00-188	2232
22494	7590	11/26/2004	EXAMINER ELLIS, KEVIN L	
DALY, CROWLEY & MOFFORD, LLP SUITE 101 275 TURNPIKE STREET CANTON, MA 02021-2310			ART UNIT 2188	
			PAPER NUMBER	

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/767,773

**Applicant(s)**

MEIRI ET AL.

**Examiner**

Kevin L. Ellis

**Art Unit**

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/24/03</u> . | 6) <input type="checkbox"/> Other: ____  |

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**Detailed Action**

1. Claims 1-30 are presented for examination.
2. Information disclosed and listed on PTO 1449 has been considered.

***Claim Rejections – 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Beardsley et al., U.S. Patent 5,680,580.

A) As to claims 1 and 15, Beardsley et al. discloses the invention as claimed. There is a remote data mirroring arrangement of data storage systems (Col 9 Lines 3-6), a method of connecting ports on a data storage system to ports on other data storage systems (see Abstract) comprising providing each storage system with configuration topology information (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), determining from a switch fabric that connects to ports of all of the data storage systems information identifying ports of the other data storage systems connected to the switch fabric (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), and using the information to establish a

logical link between a port on the storage system and a second port on a second storage system so that data residing on a device group supported by the port and a corresponding mirrored device group supported by the second port can be exchanged between the data storage system and the second data storage system (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).

- B) As to claims 2-11 and 16-25, Beardsley et al. teaches that the system gathers information about the topology of the fabric to determine which ports to use to connect to the different storage systems (see Col 8 Line 34 to Col 9 Line 34).
- C) As to claims 12 and 26, the system can use fibre channel links (see Col 6 Lines 27-29).
- D) As to claim 13, Beardsley et al. discloses the invention as claimed. There is a system comprising an arrangement of storage systems each adapted to control at least one group of devices that are supported in a mirrored configuration with a corresponding group of devices controlled by one of the other storage systems (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), for each device group and corresponding device group, first ports associated with the device group and second ports associated with the corresponding device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), and a switch element (see Fig 2 Ref 205, 215, Fig 3 Ref 305, 315, and Fig 9 Ref 905) adapted to connect one of the first ports to at least one of the second ports so that data may be exchanged between the first and second ports for each device group and corresponding device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).

- E) As to claim 14, Beardsley et al. discloses the invention as claimed. There is a data storage system comprising a port adapted to control at least one device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), a switch element (see Fig 2 Ref 205, 215, Fig 3 Ref 305, 315, and Fig 9 Ref 905) coupled to the port and ports in the other storage systems (Fig 2, Fig 3, & Fig 9), and wherein the port uses the switch element of link the port to a selected one of the ports controlling a second device group that mirrors the device group controlled by the port (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).
- F) As to claim 27, Beardsley et al. discloses the invention as claimed. There is a system comprising an arrangement of storage systems each adapted to control at least one group of devices that are supported in a mirrored configuration with a corresponding group of devices controlled by one of the other storage systems (see Abstract, Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), for each device group and corresponding device group, first ports associated with the device group and second ports associated with the corresponding device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), and one of the first ports being connected to at least one of the second ports so that data may be exchanged between the first and second ports for each device group and corresponding device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).
- G) As to claim 28, Beardsley et al. discloses the invention as claimed. There is a data storage system comprising a port adapted to control at least one device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), the port being further adapted to connect to ports in the other data storage systems via a switch element (see Fig 2 Ref 205, 215,

Fig 3 Ref 305, 315, and Fig 9 Ref 905), and the port being configured to use the switch element to link the port to a selected one of the ports controlling a second device group that mirrors the device group controlled by the port (see Fig 2, 3, & 9, and Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).

- H) As to claim 29, Beardsley et al. discloses the invention as claimed. There is a method of connecting ports on a data storage system to ports on other data storage systems comprising associating ports with a group of devices that are supported in a mirrored configuration with a corresponding group of devices with which ports on one of the other data storage systems are associated (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), and connecting one of the ports associated with the device group to at least one of the ports associated with the corresponding device group so that data may be exchanged between the ports associated with the device group and corresponding device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).
- I) As to claim 30, Beardsley et al. discloses the invention as claimed. There is a method of connecting ports on a data storage system to ports on other data storage systems comprising configuring a port to control a device group (see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57), and linking the port to a selected one of the ports controlling a second device group that mirrors the device group controlled by the port ((see Col 4 Line 60 to Col 5 Line 34 and Col 9 Lines 3-57).

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***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L. Ellis whose telephone number is 571-272-4205. The examiner can normally be reached on weekdays from 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kevin L. Ellis  
Primary Examiner  
November 23, 2004

